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Diſsertation

On

Intermittent Fever

by

Robert Taylor

1824

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Diſsertation on Intermittent Fever.

I shall not occupy time by giving a detailed account of the reasons that have influenced me in the choice of this particular subject: nor will I lengthen my exordium by apologizing for the defects of this eſsay. Nevertheleſs, I feel my inadequacy to the subject, I have selected; concious my inexperience & ignorance unfit me for saying any thing new.

I shall speak of the disease as I have seen it, & of the remedies I have seen useful in its the treatment, leaving all unsettled points to the judgment of those better qualified to decide them; but before speaking of the disease itſelf, I shall take notice of the causes which produce it.

The primary cause of Intermittent Fever, is generally acknowledged to be, Marsh Miasma or that effluvia, which is disengaged from stagnant water on marshy ground by the action

of heat, & is only known by its deleterious effects on the human system. — To a person unacquainted with the fact; the distance, which miasma may be conveyed is incredible. yet we have abundant proof of its affecting neighbourhoods quite remote from the place where it is engendered, & this is easily explained; it being volatilized by the solar rays, is wafted by the wind to the distance of many miles, exerting through its whole course its baneful effects, until so diluted by the atmosphere as to be wholly inactive.

As a current of air is neceſsary to the conveyance of miasma; it must be obvious that, whatever may impede, or turn the direction of the breeze, may act as a barrier to miasma: Hence a family may reside in a miasmatic district, & ~~very~~ very near the marsh whence miasma is exhaled, & at the same time be perfectly free from its influence, provided a hill or piece of wood intervene. Bancroft, tells us that ~~a~~ the miasma cannot be carried over water, I think I have

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seen miasma produce disease where it must have been conveyed, at least a mile and a half over water.

miasma acts more powerfully in the night than in the day; The probable reason of this is, that in the night it is more condensed: being volatilized & diffused through the atmosphere during the day by the solar rays.

Notwithstanding, it is the opinion of some, that miasma: is not always, the sole efficient cause of this disease; inasmuch as, people residing in a city remote from the source of miasma, are affected, with intermittents; yet, I believe, that, medical men are at present agreed. that where the disease so takes place, the patient has been exposed to miasmatic influence.

The greatest length of time that miasma may remain in the system inert, is a question which, will not admit of solution, yet most beleive that it may remain ~~in the system~~, six months, & then produce the same effect as if recently taken in. This seems to be clearly established by the fact, that patients are affected with vernal intermit-

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tents, who have been admitted into the hospital, in the fall of the year, & who have never before had the disease: (I have seen some such cases).

A Question which now arises, is: How, is this effluvia introduced into the system? My belief (which I derive from our worthy professor, Dr Chapman) is, that it is received into the mouth where becom~~m~~ing entangled in the saliva, is taken with it into the stomach. A fact which seems to support this belief, is, that those who chew tobacco, & are in the constant habit of throwing off the saliva, are not so liable to the disease as others. moreover, the stomach is the part first affected.—

That it does not affect the system through the lungs appears probable from the circumstance, that a person may be exposed to miasma without taking the disease, and yet it must be obvious that a person so exposed must breathe the virus, although it does not necessarily follows that he must swallow it. If the miasma ~~contagion~~ ~~were taken~~ were taken in by the lungs, we should expect to

find the pulmonary organs the first to exhibit marks of disease, — Which, (as I have premised), is not the case — It would be absurd to suppose that it finds its way into the system by the absorbents; beleiving that it will not act when presented at once to the blood in the lungs. Of exciting Causes —

A low penurious diet, fatigue, extremes of temperature, & a moist atmosphere, or whatever tends to debilitate the system may be viewed as the exciting cause of this disease; I believe the primary cause is sufficient to produce the disease, without the aid of another ~~cause~~. — If what I have advanced on the manner by which the infection is taken into the system; be admitted; we should a priori beleive the proximate cause to be derangement of the prima via, & no one doubts that it is so. It is a peculiarity of intermittent, that unlike other fevers, it increases the susceptibility to another attack, which by most other fevers is rather diminished. Except hectic, it is the only fever that occurs in distinct fits. I shall not point out the diagnosis which is very plain.

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The fits of an intermittent are called, the paroxysms; the interval between them, the apyrexia, & these paroxysms occur at stated periods of time, but the time that elapses between the paroxysms, is not of the same duration in every intermittent, on which account, it has received different appellations depending on the length of the apyrexia. Thus, a quotidian is a fever with twenty four hours between the paroxysms, when the interval between the paroxysms is extended to forty-eight hours, it is termed a tertian, & when the paroxysm occurs every fourth day it is termed a quartan. There are still other forms of the quotidian, tertian, & quartan; Thus, when two paroxysms (similar in all respects) occur every day it constitutes the double quotidian. Next we have the double tertian having a paroxysm every day, the alternate being alike; & the double Tertian with two paroxysms every other day, either with or without a single paroxysm on the intermediate day. The double Quartan with two paroxysms every fourth day; The double quartan with a paroxysm-every

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every day, the fourth being like the first; & the double quartan with a paroxysm on the first day, another on the second, & none on the third; In like manner the triple quartan, The quintan seldom occurs,

There are said to be some intermittents which have a tendency to occur monthly, these are called Menstruae, & some occur annually, called Annuae; but these may rather be considered as relapses, than as the regular forms of the disease.

" that under the tertian type is the most frequent form
" of the disease; Next to this is the quotidian; while the qu-
" artan is the most rarely to be met with, & proves the most
" difficult of management, (Dr Chapman)-

All the cases which I have seen, that did not speedily yield to the remedies employed, have assumed a protracted form, changing frequently from one form to another; thus a tertian would become a quotidian or quartan &c. To know accurately the precise form of an intermittent, seems of no great moment (farther than to prognosticate the event or continuance of it)

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, as it leads to no difference in the treatment.

Previously to an attack of the disease, the patient is languid, showing no disposition to attend to his regular occupation, his appetite is impaired & frequently fails him altogather, if proper remedies be interposed ~~at this~~ at this juncture the disease may be prevented; but if these symptoms are permitted for a few days, he is seized with the paroxysm, which takes place in the following manner. The symptoms just mentioned continue accompanied by pain in the head or vertigo & difficulty of breathing, the skin becomes contracted & is drawn tense over the fore-head - A cold sensation is felt at intervals in the lower part of the back, which extends gradually towards the head - in a short time it extends over the whole surface becoming a complete rigor, the pulse is small, frequent, & irregular; This, (the cold stage) continues for two or three hours, & is then succeeded by the hot or febrile, which commences with heat over the whole

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body, with dry skin — furred tongue — & intense thirst.
The pulse is now regular & voluminous,
Now the patient is often delirious — in a short
time another set of symptoms takes place, these
constitute the sweating stage, which consists of profuse
sweating, The perspiration commenses on the forehead & is soon diffused over the whole body.
During this stage the pulse becomes more soft
& with it subsides the paroxysm, leaving the
patient apparently well. — In a day or two (as the
case may be) he is seized with another paroxysm
which is repeated at regular intervals, until he
recovers.
These are the symptoms of a comon intermittent —
which, however, are liable to many exceptions.
The disease continuing a long time, the spleen or
liver becomes schirrous, occasioning tumors in
the hypochondriae, vulgarly called ague cakes, which
by pressing on the ductus communis cholidocus

produces jaundice; or dropsy, by pressure on the vena portae, or if this is not the termination, & if the disease be left to itself, it will run on becoming more difficult of cure until the chylopoietic viscera become so much impaired as to refuse the performance of their functions, & the patient dies from inanition, or a state of debility may ensue terminating in dropsy. to which he may eventually fall a victim.

As we should predict, we find the viscera to exhibit a morbid appearance on dissection; particularly the stomach, the billiary apparatus, & the spleen.

The indications for the cure of intermittent fever are first, to prevent, to shorten, or to abate the violence of the paroxysm; secondly, to prevent their continued recurrence. — I shall first treat of the means proper for the fulfilment of the first indication, these are few, & unless the case be violent none seem necessary.

The remedy, which to me, appears most efficient, is Laudanum; this was first employed in this disease, by Dr Trotter; And Dr Lind whe

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, who subsequently made use of it, says that when given in the intermiſsion, it did not prevent or mitigate the succeeding paroxysm; when given in the cold fit, it once or thrice seemed to remove it; but that when administered half an hour after the commencement of the hot fit, it generally afforded immediate relief, it shortened & abated the paroxysm, it relieved the head, took off the heat of the fever, & promoted diaphoresis.

Emetics given in anticipation of the paroxysm frequently prevent it.

Diaphoretics I have seen of more advantage in abating the violence of the paroxysm than any other means—
Their effect is not to be wondered at, as they imitate so closely the proceſs adopted by nature to throw off the fit. The means used to promote sweating are fomentations, pediluviums, the use of warm infusions, as of mint, chamomile, horehound, serpentaria, or eupatorium perfoliatum; of these the latter is usually preferred & if given in the cold stage produces sweating by which the hot

& part of the cold stages are avoided, this remedy sometimes vomits; when this however is the case ~~when this~~ we are to consider it as being beneficial, rather than injurious. — If these means are not adequate to induce diaphoresis, the antimonial preparations in small doses will be found sufficient; Their efficacy may be increased by using them in conjunction with the vapour-bath;

In the commencement of the disease, when much pain in the head exists, venesection is sometimes indispensable, nevertheless, this symptom may frequently be relieved, by a blister to the back of the neck.

The remedies we rely upon for the radical cure of the fever are tonics — But before the exhibition of Tonics it is usually deemed necessary to evacuate the alimentary canal; to effect which purgatives are prescribed, & the one usually selected is calomel combined with rhubarb or jalap — The cathartic is sometimes preceded by an emetic.

In the catalogue of tonics, Bark stands preeminent

I shall therefore notice it first,

Three species of Peruvian Bark are usually recognised, viz, Cinchona oblongifolia or red — Cordifolia or yellow — & lancifolia or pale.

As to the comparative efficacy of these different species, some diversity of opinion exists, but the red is mostly preferred, & on this account is frequently adulterated.

Some have recommended that the bark should be given without intermission, even during the paroxysm: But experience shews that if exhibited during the fit, it is ejected from the stomach, or if it remain aggravates the paroxysm & irritates the stomach.

The proper practice (& that which has generally obtained), is to administer the bark during the apyrexia, ceasing about an hour before the paroxysm & when good bark is thus given it eradicates the disease by a slow & sure action, unaccompanied by any very obvious effect, & without exciting the pulse.

A popular, & a very good mode of exhibiting the Bark is by

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is, by mixing it in wine.

In this form a half Drachm may be given every hour, It is given also in Tinctures, Decoctions, & Infusions, & these preparations are particularly useful when bark in substance will not remain on the stomach.

To render the above preparations more palatable, & to retain them on the stomach, they are frequently combined with Aromatics such as cort: Aurantiorum — caryophylli — or serpentaria virginiana; the latter of these substances is to be preferred, as it renders the preparation quite as pleasant & is more efficacious. These mixtures sometimes prove useful where the bark itself has failed.

The fixed alkalies are sometimes conjoined with them which adds greatly to their effect.

The alkalies are some-times also added to the bark itself, the following formula enjoys great reputation in this City — ℞. Pul: Cort: Peruviani ℥ß

Rad: Serpentariæ — ʒi

Potassæ. Sup: Carb. ℈i. M: Div: in: Chart: iv —.

. It has been a question, to what principle the bark ~~the bark~~ owes its activity, & indeed by different people it has been ascribed to each of its component parts: This question seems now, to be completely decided, for within a few years two alkaline principles capable ~~capable~~ of forming salts with acids, have been discovered; that furnished by the pale bark, is termed cinchonine, that furnished by the yellow, Quinine. Both of these principles are contained in the red bark; hence, other considerations aside; It should be the best.— Cinchonine, the alkali of the ~~yellow~~ pale bark is used pure, while Quinine, the alkali of the yellow is used in combination with sulphuric acid. During the last summer, the sulphate of Quinine, was employed more generally than any other medicine, & with the most decided effect.— All who have used it concur in its superiority over other remedies— The dose is a grain, which is supposed equal to a drachm of the bark in substance—

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It is given in the form of pills or in solution, & as to the time of exhibition is subject to the same rules as the crude bark.

for the exhibition of the sulphate of Quinine the folowing formulæ may be employed—

Ɍ. Sulph: Quinin: gr x

Concervæ: Rosæ, ʒß

M. f. Pil. — x —

One of these pills are to be taken every hour during the apyrexia——

Or in solution it may be prescribed thus—

Ɍ. Sulph: Quinin. gr xii

Aquæ: Distillatæ ℥vj

f. solutio.

A small quantity of sulphuric acid added to this will make the solution more complete—

The dose of this solution, is a tea-spoon full every hour, or every half hour.—

several formulæ for the preparation of the—

sulphate of quinine, are contained in the eleventh & twelfth volumes of the London journal of sciences—. When owing to the irritability of the stomach, this remedy cannot be given by the mouth, it may be administered in the form of enema; This remark, however is much more applicable to the crude bark, which frequently sickens the stomach.

The Cortex querci; pruni virginianæ; & the salicis, have all been used as substitutes for the peruvian bark, as also the cortex cascarillæ & the canellæ albæ,

The aromatic qualities of the two last mentioned barks seem to suit them well for irritable stomachs.

The angustura bark poſseſs considerable power over this fever, though like the peruvian bark it is apt to prove offensive to the stomach — A poisonous bark is vended under the name angustura, fortunately there are several marks which may serve to distinguish it from the genuine.

Another vegetable remedy employed in this fever is serpentaria,

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but of this I have said all that seems neceſsary when speaking of the peruvian bark, as it is seldom used alone.

The spirit of turpentine has been much employed in this disease, & sometimes removes the disease when the other remedies have failed.

Arsenic is a remedy, which by many is thought to be omnipotent in this fever, & by many it is objected to apparently with good reason. — I am not qualified to judge of its merits from not having seen it much employed; yet I think it greatly inferior to the bark, & when employed it should be used with much discrimination. — The preparation usually employed is Fowler's solution.

The preparations of iron have also been recommended & used with advantage. The only one of these that I have seen used was the pruſsiate — its good effect was very obvious — most of the other preparations of this metal are worthy of trial.

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Sulphur is highly recommended in intermittent fever, I have seen it employed by Dr Otto, with much advantage.

Telæ Aranearum or spiders webs have been used succeſsfully by many respectable Physicians.

The black spider itself I have used in three cases, in two of which it failed of doing good, while in the other, it cured the patient so that he had not another paroxysm.

When intermittents, have continued long, and the remedies that I have enumerated, have been ineffectually tried, & if the stomach becomes so much impaired as to be incapable of retaining food, we must resort to the bitter tonics; of these the cold infusions of chamomile flowers or of gentian or Quassia are to be preferred. If these fail of restoring the tone of the stomach; the the prescriptions usual in dyspepsia are to be administered.

When the stomach is not disordered, & yet the parox-

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ysms continue to recur regularly: we are to presume they are kept up by habit; & by a perseverance in the use of emetics ~~he will be relieved~~. they will be removed.

If the viscera continue in a state of disease, the patient having in other respects recovered, mercury is to be resorted to; but should this be ineffectual, he must (if he be in the country), be removed to a city, for by a city residence he will be most likely to recover.

In the administration of the remedies I have enumerated we must be careful not to persevere in the use of one for a long time; but must substitute another as soon as one ceases to be effectual, for it is a known fact that what at one time appears to be inert, is at another most efficacious.

I have not yet taken notice of the diet necessary in this disease, & respecting it, have only to observe that it should consist of light nutritious food, & that which is most easy of digestion.

I have now finished what I had to say on this disease.

Residence No. 133 Market St.